

# apb FORUM

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## 208 WATER QUALITY WORK FLOWS ON

In the past several months of the Area Planning Board's 208 Water Quality Management Program, 15 background studies have been completed. Twelve of these work outputs — six done by APB staff and six by consultants — were reviewed by the three public participation committees. Most received minor changes at committee request, while one output was completely rewritten. A table listing the outputs reviewed is provided on page 3 of this newsletter.

Three more background studies are drafted and to be reviewed at committee meetings Oct. 12. These are outputs No. 204, "Calculation of Agricultural Non-Point Source Loadings", No. 215, "Waste Management Techniques Analysis", and No. 201, "Point Sources That May Be Subject to the Extended NPDES Permit Program".

### RUNOFF SAMPLING

The photo at right illustrates one of the major study tasks in the 208 program: actual sampling to measure water quality after rainfall and runoff. Sampling is done at stations in both rural and urban locations on various canals, on Lake Worth and from wells. A complete description of the field and laboratory work being done is on page 2 of this newsletter.

### THE RUNOFF PROBLEM

Why is 208 so concerned with the water that goes "down the drain" (into sewer inlets or surface watercourses) after a rainstorm? At first thought, stormwater may seem a fairly "natural" and harmless phenomenon, and it mostly would be so if people weren't part of the ecology. But think again and look at it this way: What happens during and after a rainfall, in town or in the country, is pretty much what happens when you take a shower or bath after working in the garden or on the car. Dirt and grease are washed off surfaces and down the drain. It feels fresh after a rain — everything, including our often



Palm Beach County Health Dept. technician readies instrument for sampling at West Palm Beach Canal location in September.

polluted air, has had a rinsing. As nice as this is, and also as necessary, we tend to forget that the dirt and grease don't really disappear. They just get relocated.

When you pull the plug in the kitchen or bathroom sink, you may not think about it but you have some idea of where your waste water is going. You probably know it is headed for some degree of filtering or other treatment at a plant before it will reach the ground or a major body of water. However, when rainwater runs off farmland or city streets and sidewalks, it goes straight into the nearest ditch, culvert, storm drain or canal, carrying its pollutant load to a pond, a lake or the ocean.

What does the pollution consist of? Whatever can dissolve in or be carried by water: dust, sand, lawn

(Turn to PROBLEM, page 3)



# RUNOFF SAMPLING PROGRAM

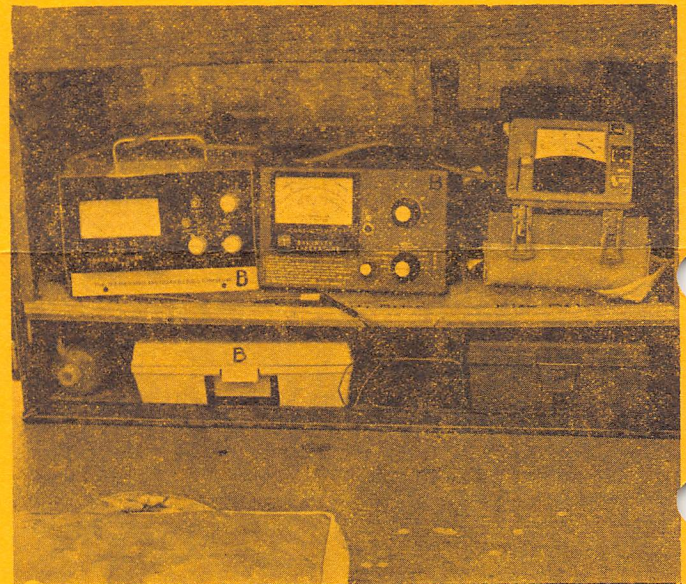
The Palm Beach County Health Dept. gathers all water samples and does most of the testing, under contract with 208. It subcontracted two areas of laboratory analysis: the bacteria tests, by Holley State Hospital, and the pesticide/herbicide tests, by Everglades Laboratories, a private firm.

In order to analyze both agricultural and urban runoff waters, sampling stations were designated at three western rural points on the West Palm Beach Canal, at four more points on the canal in urbanized areas, and at two locations on Lake Worth. The program specified taking samples first during a "dry" base period and then during three separate "storm events" — widespread rains of at least one-half inch. The "base flow period" sampling, done after three days without rain, consisted of five runs at 8-hour intervals. The storm event sampling is set at every other hour for the first eight hours, then once each at the 32-hour and 72-hour points in time. Field measurements are performed with portable instruments at the stations on the same runs when water samples are collected. Factors recorded are the exact amount of rainfall, the water's rate of flow, its temperature, pH (acidity), salt content (in the Lake only), and dissolved oxygen. Samples sent to the laboratories are checked for amounts of various forms of nitrogen and phosphorus, suspended and dissolved solids, and the above-mentioned bacteria, pesticides and herbicides. In addition, the usage of oxygen by microscopic organisms in the water is measured over 5-day and 21-day periods.

At this writing two storm event samplings are completed, and one more will give 208 the detailed picture it needs of water quality effects from storm runoff. The next 208 newsletter will discuss possible ways to reduce this form of pollution.



Health Dept. crew of technicians coordinates on taking West Palm Beach Canal sample readings . . .



... on set of instruments giving such measurements as rate of flow, temperature and dissolved oxygen.

[illegible]

### A RELEVANT QUOTE

*"If you're talking about man-water contact activities (in the Intracoastal Waterway), the problem with that is you're never going to get the county Health Department endorsement, approval or permitting of that because of the storm drainage runoff problem."*

-Jim Barry, Health Dept. biologist, to downtown West Palm Beach businessmen (Quoted in the Palm Beach Post September 29, 1977)

## CAMPOUT A-COMIN'

As we approached press time, APB staff members were looking forward to the Oct. 15-16 campout gathering of planners and environmentalists at Pioneer Park in Hardee County. Jointly sponsored by Central Florida Regional Planning Council, the Florida Audubon Society and the Polk County Sierra Club, the weekend promised barbeque and bluegrass, sandwiched between workshops, water sampling and a canoe trip, all in the beautiful setting along the Peace River. The expected benefits of this "down-home" public participation event will be reported in our next 208 newsletter.



## SUMMARY OF 208 WORK OUTPUTS REVIEWED

Output Number	Title	Contents	Author	Committee Reviews	Completion
108	Evaluation Criteria	Sets forth measures to facilitate judging water quality management options.	HSMM <sup>1</sup>	June 1977	Aug. 10, 1977
109	Regulatory and Institutional Options Analysis	Applies Output No. 108 to existing institutions re potential management roles.	HSMM	July 1977	Aug. 10, 1977
113	Determination of Financial Capabilities	Furnishes background on municipal tax bases, debts and expenditures.	HSMM	July 1977 (Revised)	Apr. 13 and Aug. 10, 1977
114	Legislative and Institutional Constraints to Financing	Assesses powers and functions of existing agencies involved in water pollution control finances.	HSMM	April 1977	Apr. 13 and Aug. 10, 1977
212	Point Source Loading: Generation & Disposal of Effluent and Sludge	Summarizes existing wastewater treatment facilities and work done by "201" planning agencies in the area.	APB	May 1977	June 8, 1977
216	Regional Water Supply Alternatives	Describes the area's existing and potential water sources.	SFWMD <sup>2</sup>	May 1977	June 8, 1977
217	Environmental Implications of Water Use Plan Alternatives	Assesses social and environmental impact of utilizing sources identified in Output No. 216.	SFWMD	June 1977	July 13, 1977
401a	Population Growth Trends and Characteristics	Provides data base and analysis of current and historic population makeup.	APB	June 1977	Aug. 10, 1977
401b	Physical Characteristics	Describes all pertinent features, weather, soil and drainage factors in area.	APB	June 1977	Aug. 10, 1977
402	Economic Base Summary	Compiles detailed data on business, employment and income picture of area.	APB	May 1977	June 8, 1977
406	Population/Economic Projections	Gives 5-year increments of expected growth in all segments, to year 2000.	APB	July 1977	Aug. 10, 1977
501	Environmental Setting	Assesses physiography, flora and fauna, and conservation needs of area.	APB	June 1977	Aug. 10, 1977

1 - Consultant firm of Hayes, Seay, Mattern and Mattern

2 - South Florida Water Management District

## DIRECTORS BRIEFED

Project Director Richard Stalker attended a statewide meeting of 208 directors Sept. 8 in Orlando. Environmental Protection Agency (EPA) Region IV and Florida Department of Environmental Regulation (FDER) officials briefed the attendees on two State and Area-wide Memorandums (SAMs). SAM-27 is a set of guidelines for FDER's review of regions' 208 plans. The significant aspects were explained, including implications of "approval, conditional approval or disapproval" of plans on an element-by-element basis. SAM-28 sets EPA priorities for distributing \$14 million in Fiscal Year 1977 funds to regional agencies. Stalker learned that Palm Beach County was at the top of Category Two, defined as "agencies adequately funded

during FY 1975 . . . which have been the recipients of substantially increased consistent guidance and assistance, and which have had sufficient time to adjust their planning efforts to current program priorities and guidance." This appears to give our agency a good chance of receiving funds for 1978, if EPA authorizes certain kinds of work on the final Areawide Waste Treatment Management Plan beyond its scheduled January 10 submittal.

### *PROBLEM, from page 1*

and crop fertilizers, insect sprays, oil and gasoline, dead leaves and cuttings — so many seemingly minor things of themselves, but a heavy load when added together. In recognition of this, the sampling study described on page 2 was launched.



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